

Seafood

- Seafood is any form of sea life regarded as food by human
- Seafood prominently include fish and shellfish
- Shellfish include various species of molluscs and crustaceans.
- Historically, sea mammals such as whales and dolphins have been consumed as food, though that happens to a lesser extent these days.
- Edible sea plants, such as some sea weeds and microalgae, are widely eaten as seafood around the world, especially in Asia.
- In America, although not generally in the United Kingdom, the term “seafood” is extended to fish water organisms eaten by human, so all edible aquatic life may be referred to as seafood.
- The harvesting of wild seafood is known as fishing and the cultivation and farming of seafood is known as aquaculture, mariculture, or in the case of fish, fish farming.
- Most of the seafood harvest is consumed by human, but a significant proportion is used as fish food to farm other fish.
- Some seafood (kelp: large sea weeds) are used as food for other plants (fertilizer).

Classification of Seafood

The following classification is based on the ISSCAAP classification (International Standard Statistical Classification of Aquatic Animals and Plants) used by FAO for the purposes of collecting and compiling fishery statistics.

1. Fish

Fish are aquatic vertebrates which lack limbs with digits, use gills to breathe, and have heads protected by hard bone or cartilage skulls.

1.1. Pelagic fish

Pelagic fish live and feed near the surface or in the water column of the sea. The main seafood groups can be divided into larger predator fish (sharks, tuna, swordfish, mackerel) and smaller forage fish (herring, sardines, anchovies). The smaller forage fish feed on plankton, and can accumulate toxins to a degree. The large predator fish feed on the small forage fish, and accumulate toxins to a much higher degree than the forage fish.

1.2. Demersal fish

Demersal fish live and feed on or near the bottom of the sea e.g. cod, flatfish etc. Demersal fish feed mainly on crustaceans found on the sea floor, and are more sedentary than the pelagic fish.

1.3. Diadromous fish

Diadromous fish can migrate between the sea and fresh water e.g. salmon, eels, lampreys etc.

1.4. Freshwater fish

Freshwater fish live in rivers, lakes and ponds e.g. tilapia, catfish, trout etc. Generally, freshwater fish lend themselves to fish farming more readily than the ocean fish.

2. Molluscs

Molluscs (from the Latin *molluscus*, meaning *soft*) are invertebrates with soft bodies that are not segmented like crustaceans. Molluscs are of three types.

2.1. Bivalves

Bivalves also referred as *clams*, have a protective shell in two hinged parts. A valve is the name used for the protective shell of a bivalve, so bivalve literally means *two shells*. Examples of bivalve are oysters, scallops, mussels etc.

2.2. Aquatic gastropods

Also known as *sea snails*, are univalve which means they have a protective shell that is in a single piece. Gastropod literally means *stomach-foot*, because they appear to crawl on their stomach. Common examples are abalone, limpets etc.

Bivalves and gastropods are protected by a calcareous shell which grows as their body grow.

2.3. Cephalopods

Cephalopods are not protected by a shell. Cephalopods literally mean *head-food*, because they have limbs which appear to issue from their head. They have excellent vision and high intelligence. Cephalopods propel themselves with a water jet and lay down “smoke screens” with ink. Examples are octopus, squid and cuttlefish.

3. Crustaceans

Crustaceans (from Latin *crusta*, meaning crust) are invertebrates with segmented bodies protected by hard crusts (Shell or exoskeletons), usually made of chitin and structured somewhat like a knight’s armor. The shell does not grow, and must periodically be shed or moulted. Usually two legs or limbs issue from each segment. Most commercial crustaceans are decapods, that is they have ten legs, and have compound eye set on stalks. Their shell turns pink or red when cooked. Examples are shrimps, prawns, lobsters, krill etc.

Krill are like baby shrimps, except they have external gills and more than ten legs. Humans consume krill in Japan and Russia, but most of the krill harvest is used to make fish feed and for extracting oil. Krill oil contains omega-3-fatty acids, similarly to fish oil.

4. Sea mammals

Sea mammals form a diverse group of 128 species that rely on the oceans for their existence. Whale meat is still harvested from legal, non-commercial hunts.

5. Echinoderms

Echinoderms are headless invertebrates, found on the seafloor in all oceans and at all depths. They are covered with a calcareous and spiky skin. Echinoderms used for seafood include sea cucumber, sea urchins, and occasionally starfish.

6. Sea weeds

Seaweed is term which lacks a formal definition. Broadly, the term is applied to the larger, macroscopic forms of algae, as opposed to microalgae. Examples of sea weed groups are the multicellular red, brown and green algae. Edible seaweeds typically contain high amounts of fiber and, contrary to terrestrial plant based foods, they contain a complete protein.

Sea weeds are used extensively as food in coastal cuisines around the world. Sea weed has been a part of diet in China, Japan and Korea since prehistoric times.

Other aquatic plants include microalgae that can be consumed by humans and animals, such as species of cyanobacteria (spirulina).

7. Roe

Roe is egg of fish and used both as raw and cooked ingredient in many dishes. Examples are caviar (sturgeon roe), ikura (salmon roe) and kazunoko (Herring roe).